

Appendix C

Correlated PM₁₀ Concentrations and Winds

The following graphs illustrate the direct correlation between wind speeds¹ and PM₁₀ concentrations at select monitoring sites within the Salton Sea Air Basin on July 23 and July 24, 2016. Note a variety of instruments measure wind speed at different times during any given hour. Therefore, the following graphs reflect the hour of the wind measurement.

IMPERIAL COUNTY SITES (Figures C-1 to C-5)

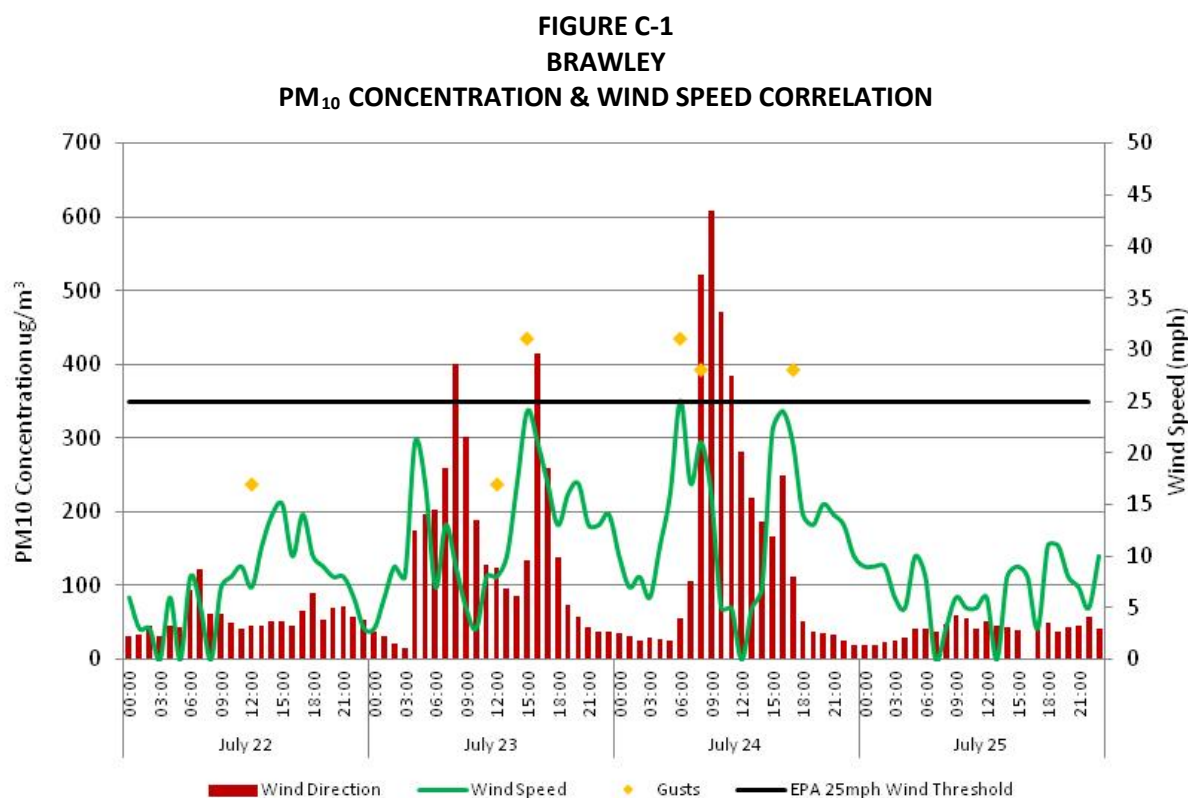


Fig. C-1: Fluctuations in hourly concentrations over 72 hours show a positive correlation with wind speeds, and particularly gusts, at Imperial County Airport (KIPL). Brawley station does not measure wind. Air quality data from the EPA's AQS data bank. Wind data from the NCEI's QCLCD system.

¹ National Weather Service; NOAA's Glossary – Wind Speed: The rate at which air is moving horizontally past a given point. It may be a 2-minute average speed (reported as wind speed) or an instantaneous speed (reported as a peak wind speed, wind gust, or squall); <https://w1.weather.gov/glossary/index.php?letter=w>

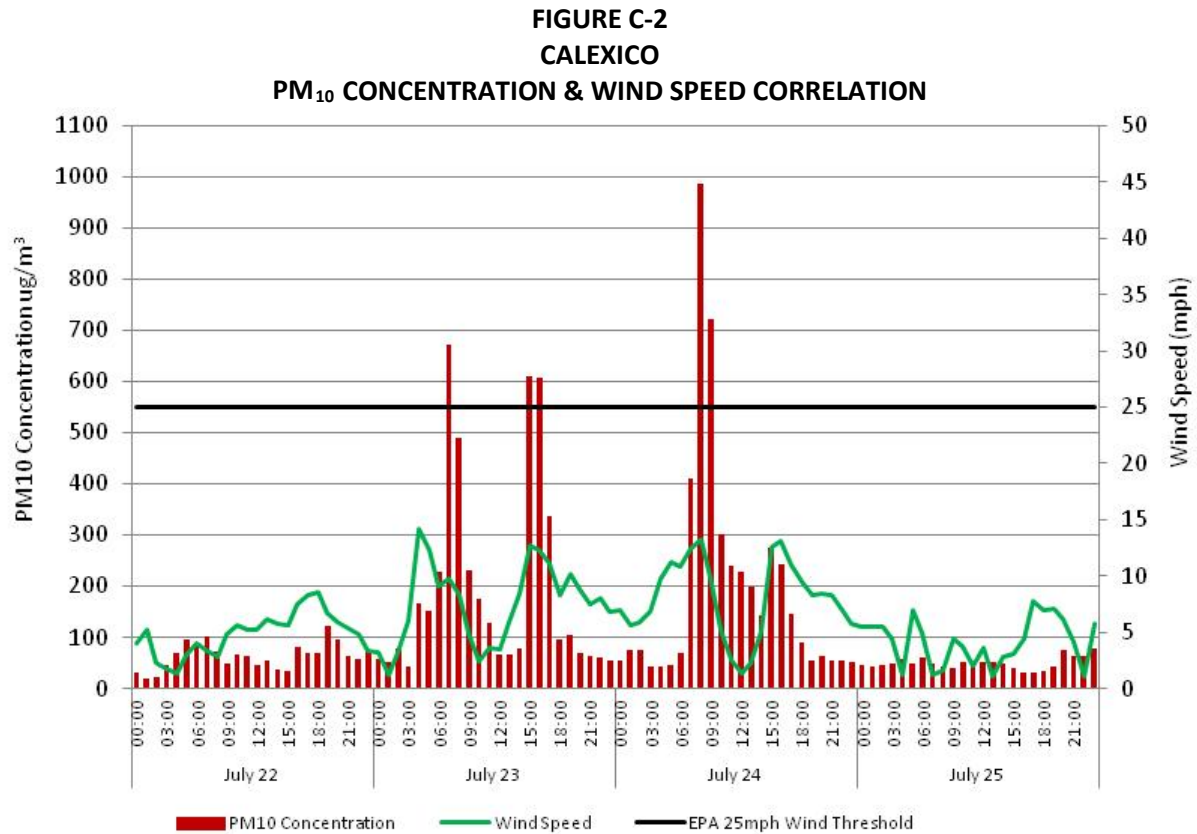


Fig. C-2: Winds at Calexico did not reach the 25 mph threshold. However, the lesser wind speeds allowed for dust to be deposited on the monitor, causing exceedances on July 23 and July 24. Air quality and wind data from the EPA's AQS data bank.

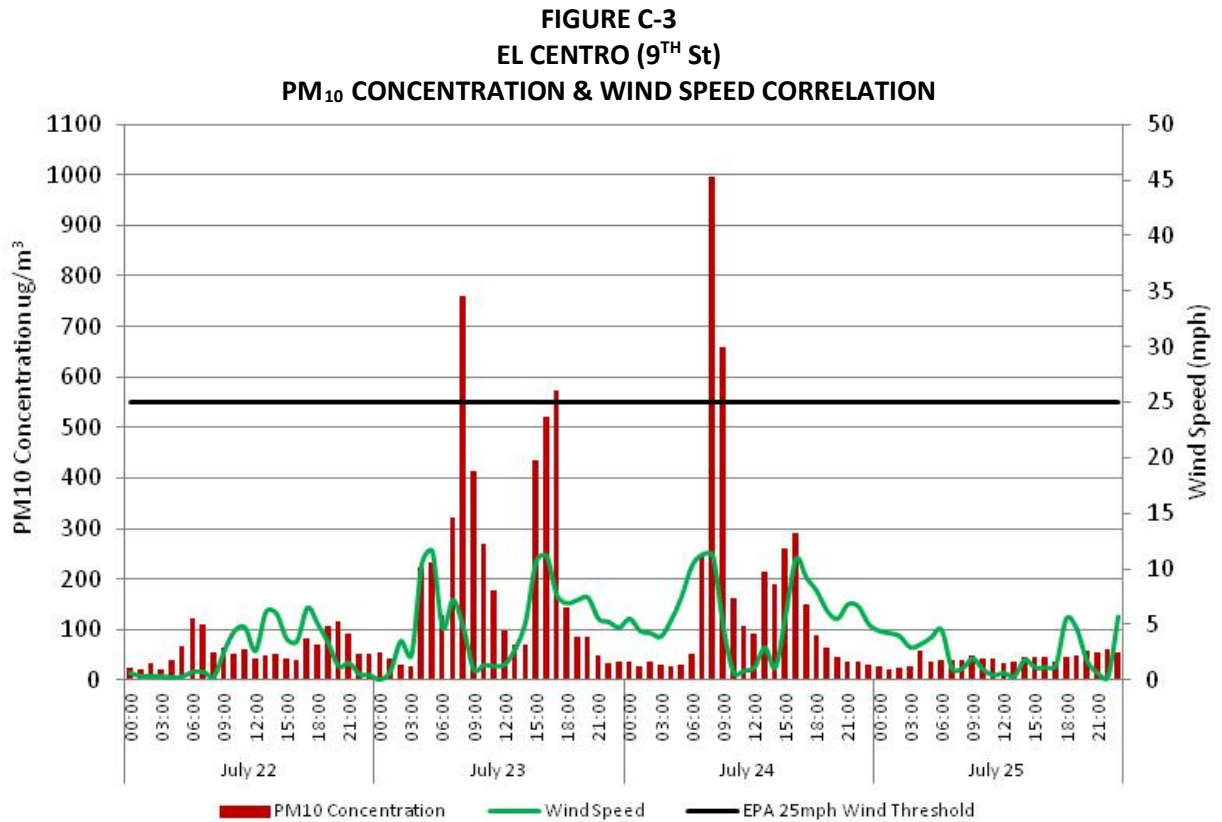


Fig. C-3: Winds at El Centro did not reach the 25 mph threshold. However, the lesser wind speeds allowed for dust to be deposited on the monitor, causing exceedances on July 23 and July 24. Air quality and wind data from the EPA's AQS data bank.

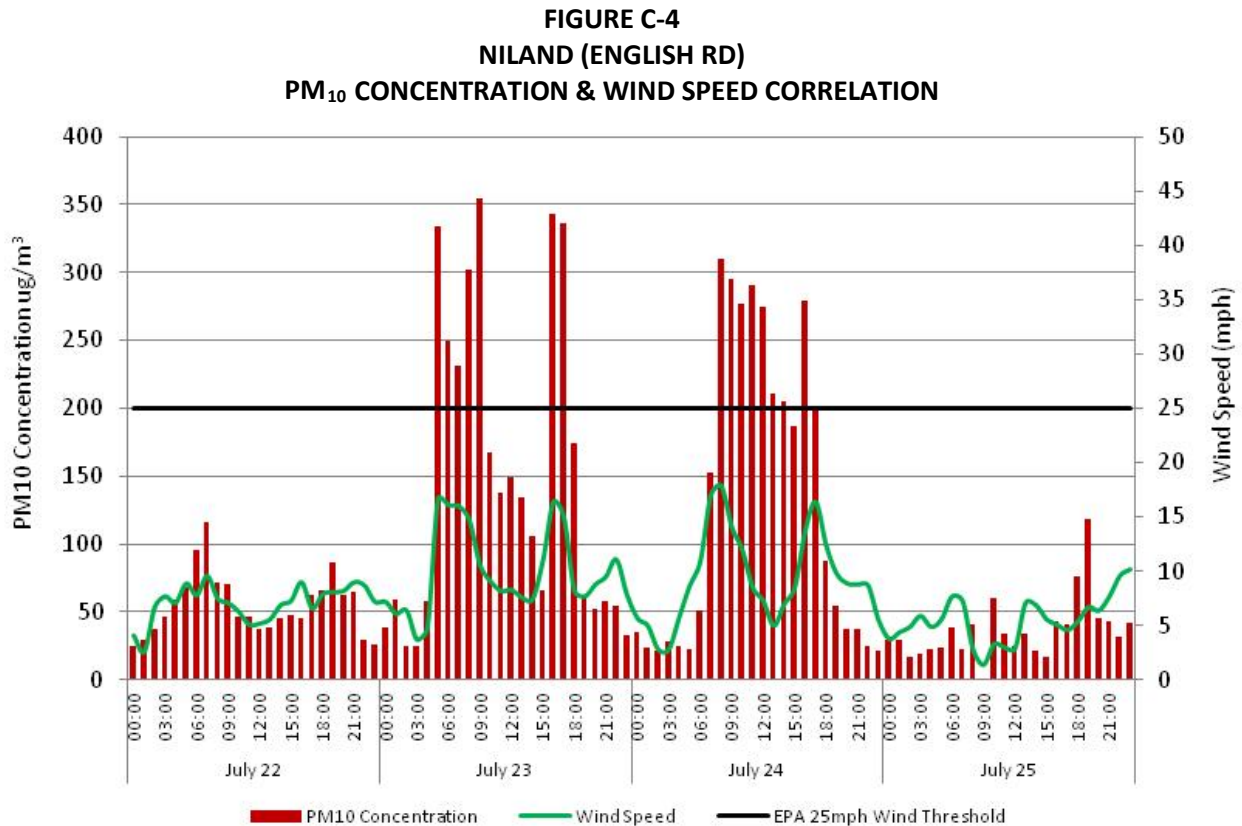


Fig. C-4: Winds at Niland (English Rd) did not reach the 25 mph threshold. However, the monitor still saw a rise in concentrations on July 23 and July 24. However, since winds were southerly, the stations to the south took the brunt of the dust. Niland did not exceed. Air quality and wind data from the EPA's AQS data bank.

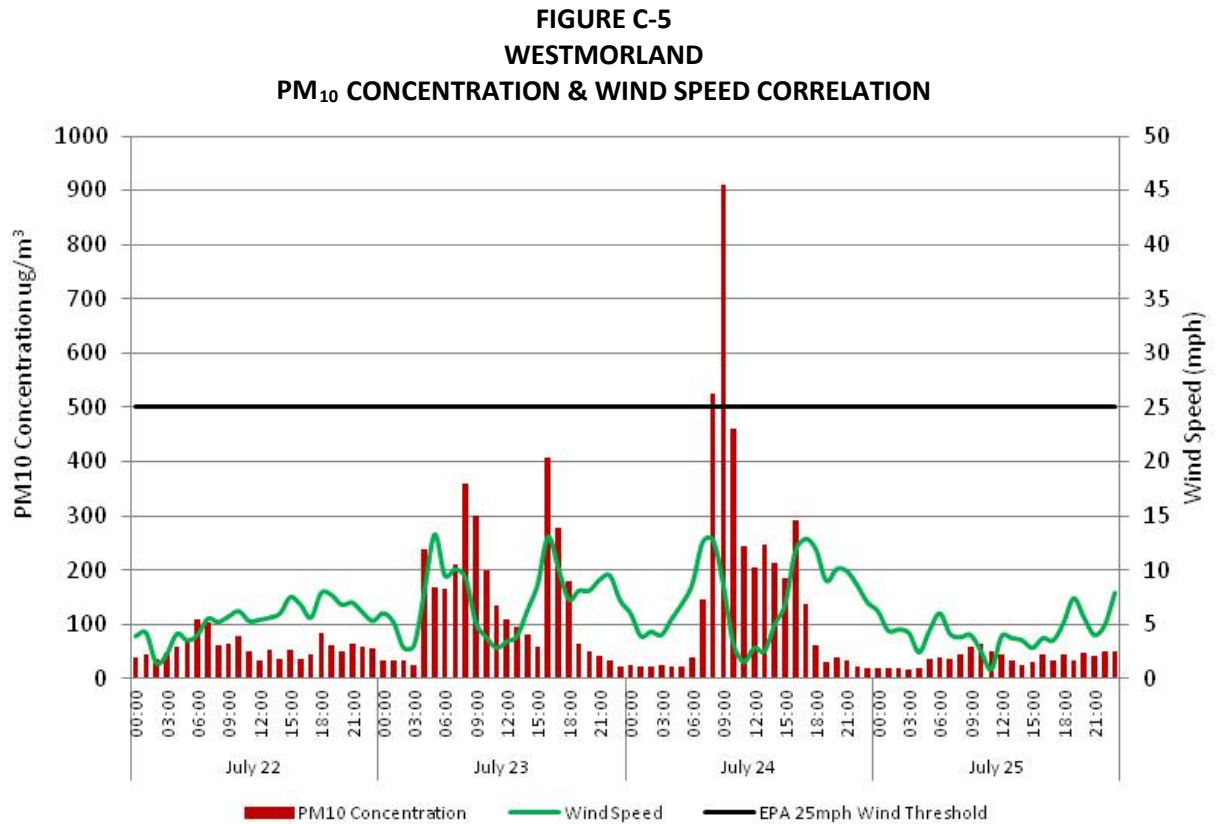


Fig. C-5: Although winds did not surpass 25 mph at Westmorland station, higher winds upstream transported dust downstream, where lower wind speeds at the station allowed dust to be deposited. Air quality and wind data from the EPA's AQS data bank.

EASTERN RIVERSIDE COUNTY SITES

FIGURE C-6
TORRES-MARTINEZ DESERT CAHUILLA INDIANS RESERVATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

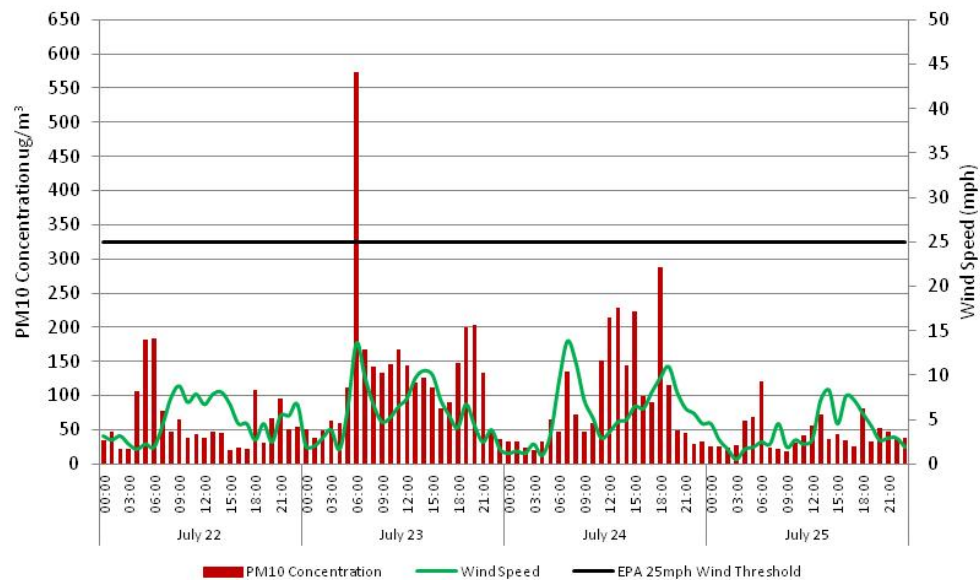


Fig. C-6: Concentrations rose in response to higher winds on July 23 and July 24. Air quality and wind data from the EPA's AQS data bank.

FIGURE C-7
INDIO (JACKSON ST)
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION

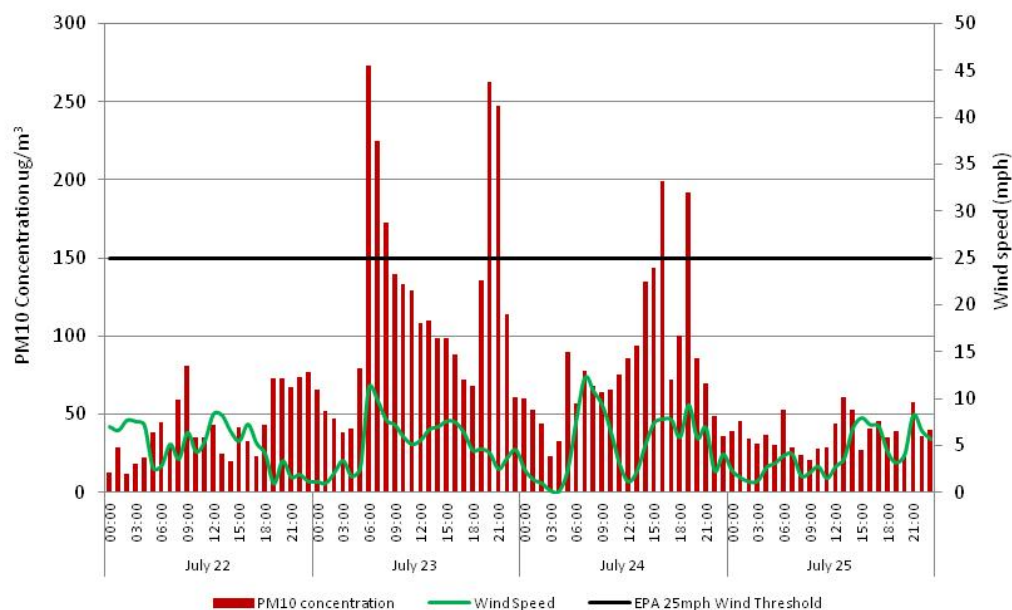
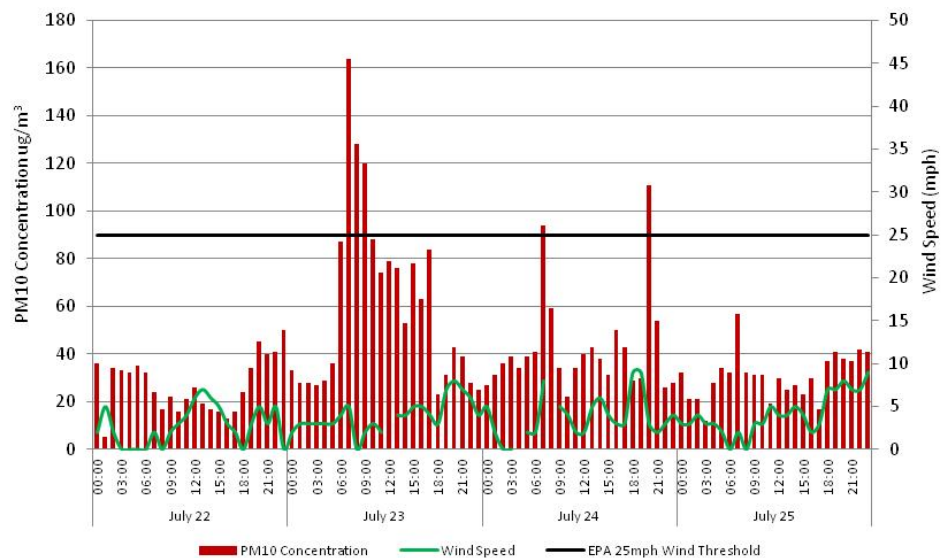


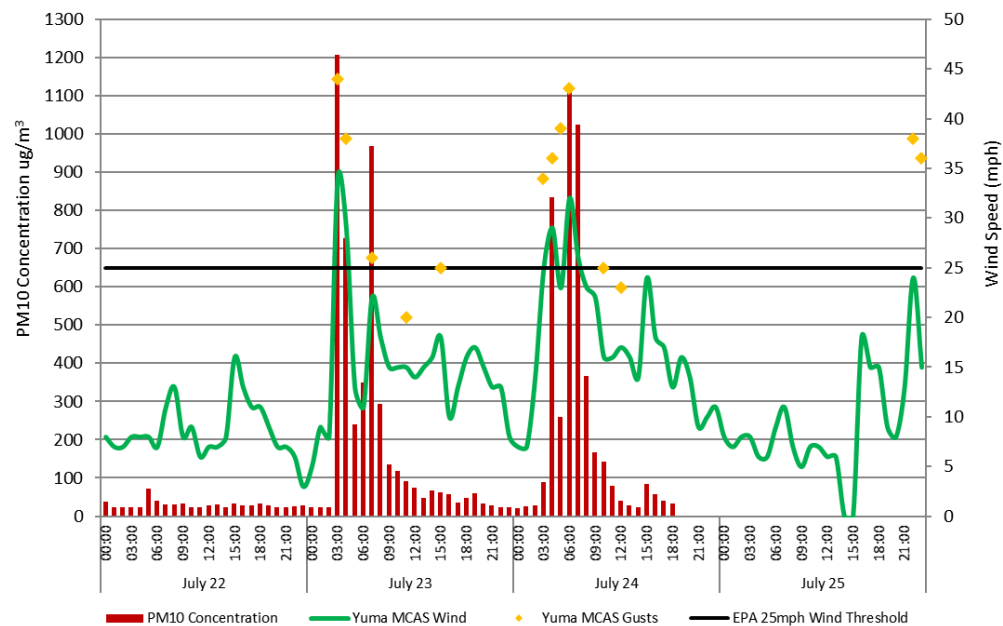
Fig. C-7: Concentrations rose in response to higher winds on July 23 and July 24. Air quality and wind data from the EPA's AQS data bank.

FIGURE C-8
PALM SPRINGS FIRE STATION
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION



Figs C-8: Concentrations rose in response to higher winds on July 23 and July 24. Air quality and wind data from the EPA's AQS data bank.

SOUTHWESTERN ARIZONA
FIGURE C-9
YUMA, ARIZONA SUPERSITE
PM₁₀ CONCENTRATION & WIND SPEED CORRELATION



Figs C-9: Yuma Supersite in Yuma, Arizona, located upstream in the southwestern portion of Arizona, saw corresponding increases in particulate matter as wind speed increased on July 23 and July 24. Wind data from the NCEI's QCLCD system.